Applying Abstract Idea Under § 101 at PTO

Many commented that the Alice decision[1] was a not a significant departure from previous decisions. After all, Benson[2] already had held that a general implementation on a digital computer is not enough to confer subject matter eligibility. However, in recent conversations with the author and other practitioners, examiners have indicated a plan to effectively reject all software claims. When asked why, the response pointed to a lack of specific guidance with respect to the Alice decision.

A recent PTO memo[3] has provided guidance, and explicitly states that "[n]otably, Alice Corp. neither creates a per se excluded category of subject matter, such as software or business methods, nor imposes any special requirements for eligibility of software or business methods." Further, the memo provides examples of abstract ideas as: (1) Fundamental economic practices – Alice, (2) Certain methods of organizing human activities – Bilski,[4] (3) "[A]n idea of itself – Benson and Le Roy[5]; and (4) Mathematical relationships/formulas – Benson and Flook.[6] Even with these examples, examiners appear to not be limited by them, or even trying to categorize an invention as one of them.

Part of the reason may be the form paragraphs[7] are so general as to allow minimal or no analysis to be done. Examiners want a bright line rule, which many examiners viewed as the inclusion of a computer (even though the preclusion of an abstract idea always applied), but now that bright line rule is gone. So what are patent practitioners to do so that the Supreme Court's warning of "we tread carefully in construing this exclusionary principle lest it swallow all of patent law"[8] does not become a reality, lest we get rid of all software patents altogether? Below are some suggestions on how to add rigor to the analysis, but first an analysis of Alice is important.

Supreme Court's Alice Decision

As an initial issue, it is important to reiterate that Alice Court did not prohibit all software claims, as is acknowledged by the PTO memo. Further, there was no requirement that software be used to control a manufacturing process or cause any external action, which is how software was used in Diehr.[9] Specifically, the Alice Court states that "[i]n any event, we need not labor to delimit the precise contours of the 'abstract ideas' category in this case."[10] The reasoning was that the intermediated settlement of Alice was so similar to the hedging of Bilski, since both are "a fundamental economic practice long prevalent in our system of commerce.'"[11] Thus, some external physical transformation is not required in response to a computer signal, or at least the Supreme Court has not imposed such a requirement yet.

Further, the Alice Court highlighted that all inventions involve nature, natural phenomena, or abstract ideas, and thus "an invention is not rendered ineligible for patent simply because it involves an abstract concept."[12] Since involvement is not enough, the first step of the test is "whether the claims at issue are <u>directed to</u> one of those patent-ineligible concepts."[13] Thus, not every claim automatically satisfies the first step, but only claims that are directed to patent-ineligible concepts, i.e., not claims that merely involve patent-ineligible concepts, as that would be all claims.

The second step is to determine whether the claim pre-empts any implementation of the patent-ineligible concept, i.e., does the claims include "an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'"[14] In other words, are any of the additional elements or a combination of the elements not necessary (at least in a significant manner) to implement the patent-ineligible concept? Such a test of necessary elements is the unanimous interpretation by the Federal Circuit's en banc decision,[15] which holding was not disturbed by the Supreme Court's decision in Alice.

Suggested Guidelines for Rigorous Application of Abstract Idea

As mentioned above, the Alice Court did not define explicitly what a patent-ineligible abstract idea is. And, perhaps such a definition is not possible, or even desired as it might be too limiting or over inclusive. But, we can look at precedent to identify indications of ineligibility, where the more different a claim is than previous ineligible claims, the less likely a claim is ineligible (and thus more explanation should be required of an examiner). Prior Supreme Court opinions also show that ineligible claims are also accompanied by possible rejections under 35 U.S.C. § 112 or 102/103.

When looking at precedent, the abstract idea has been defined as a short word (e.g., escrow in Alice or hedging in Bilski), a phrase (e.g., conversion of binary-coded-decimal (BCD) to binary in Benson), or an explicit formula (e.g., B1=Bo(1-F)+PVL*F in Flook). A word or phrase can provide much information due to a well-known definition of the word. Thus, an ability to define a claim in a few words is a possible indication that the claim is directed to an abstract idea. However, if the claim cannot be defined in a word or phrase, then the claim is less likely to be abstract. And, if more than one sentence is needed to define the so-called abstract idea, then the claim is highly likely to be abstract idea. Otherwise, any claim could be considered abstract, as a paragraph or two could specify every detail of the claim.

Accordingly, a rigorous test should require the examiner (and a court when in litigation) to explicitly define the abstract idea. Moreover, this definition should be fixed and not characterized in various ways during a rejection, as was done in Digitech[16] recently by variously characterizing the abstracts idea as organizing information, gathering and combining data, and employing algorithms to generate information. Only by specifying what the abstract idea is

asserted to be can a proper argument be made to counter the rejection. Without such a rigorous requirement, the rejection is simply a conclusion.

Once the abstract idea is specified, an examiner and a court should be required to identify the limitations in the claim that are added to the defined abstract idea. The additional limitations then need to be analyzed separately and in combination to determine whether all of the additional limitations are necessary in all implementations of the abstract idea, so as to determine whether the abstract idea is pre-empted. If a limitation is not necessary, then the abstract idea is not pre-empted, and the claim is directed to eligible subject matter. Such a test does shift the analysis to what is "necessary," but this at least frames the question in a manner amenable to discussion. For example, an applicant can argue there are other ways that the defined abstract idea can be implemented and that are also not covered by the claim.

Other Technology

The Alice Court provides sufficient criteria as to whether a limitation is not necessary, and thus something significantly more than the ineligible concept. Such sufficient criteria are when one or more additional claim limitation(s) "improve the functioning of the computer itself or "effect an improvement in any other technology or technical field."[17]

Examples of improving the operation of a computer are scheduling of processes to reduce latency, operational order to reduce computational cost, routing signals with decreased error, computer interfaces that increase functionality or productivity, and better memory management. Examples of other technical fields include medical diagnostics, cryptography, imaging, and databases.

Implication of Other Statutes

Additionally, in looking at precedent, other statutes are typically implicated, and a rejection only under 35 U.S.C. § 101 should be rare, if ever possible. Morse[18] relates to the telegraph and was one of first Supreme Court cases that rejected a claim for being directed to an abstract idea. Claim 8 was directed to any use of electromagnetism for communication. The decision focuses mainly on enablement of the full claim scope in stating "Professor Morse has not discovered that the electric or galvanic current will always print at a distance, no matter what may be the form of the machinery or mechanical contrivances through which it passes."[19] The Morse Court also found a lack of written description in stating "he claims an exclusive right to use a manner and process which he has not described."[20]

Accordingly, 35 U.S.C. § 112, 1st paragraph is implicated along with eligible subject matter considerations. One reason is that Morse's claim 8 was directed to a result (i.e., the communication) without specifying how the result is achieved. Thus, the claim covered every way to achieve result, which was not enabled or described to convey that Morse was in possession of every way to achieve the communication.

It will also be common to have a § 102/103 rejection in connection with a § 101 rejection. Both Bilski and Alice point out that the subject matter was well known. In fact, Alice points to a book from 1896 for teaching intermediate settlement (i.e., escrow). Whenever the abstract idea is asserted to correspond to a fundamental economic practice, a 102/103 rejection can and should be made. And, the formula in Flook is of a common type, given the holding that the field of use in the preamble was not an active limitation, and thus the variables were not tied to physical values. If the variables are tied to physical values, Diehr and not Flook would apply.

As to the possibility of only having a § 101 rejection, an examiner proffered that maybe the abstract idea itself could be non-obvious, and thus there would be no § 102/103 rejection. Even this were possible, there most certainly would be a § 112 rejection for covering more scope that is enabled and described. And, such an assertion of some non-obvious abstract idea would swallow up all of patent law, as is warned in Alice.

One possible example of having only a § 101 rejection is claim 13 of Benson. Benson invented a more efficient way to convert BCD to binary on a common computer architecture and need at that time. Specifically, the prior art used a table, which was expensive to read from memory. Instead, Benson performed additional operations, which avoided the need to access memory, and thus the technique improved the operation of the computer. However, claim 13 did not include any aspect of a computer. The mere manipulation of numbers that do not represent any physical values does not provide any utility, and thus the rejection of claim 13 only under § 101 was proper, since the method of claim 13 is not "useful."

But, the Benson Court made a factual mistake as to claim 8, in that claim 8 did recite a "register," and thus was related to a specific computer architecture that did operate more efficiently using the claimed method. The Benson decision did not acknowledge the claimed register, and thus as far as the opinion is concerned, the register did not exist in claim 8. Therefore, the precedential effect of Benson must be limited to the factually incorrect assumption that claim 8 was directed to any digital computer. Whereas, claim 8 was actually directed to a specific computer architecture whose operation was made more efficient, and thus did not even pre-empt all uses on a digital computer. Arguably, claim 8 could have been more specific as to the computer architecture that operated in an improved manner so as to fall within the later-specified safe harbor of Alice, reserved for inventions that improve the operation of the computer.

Conclusion

Early evidence indicates that examiners need more guidance to implement Supreme Court case law properly, so as not to summarily reject all software claims, which is explicitly counter to the Alice decision. The PTO should produce updated guidance outlining the need to define the abstract idea and follow the unanimous (and undisturbed) holding of the Federal Circuit regarding additional limitations being necessary when pre-emption holds.

In the meantime, patentees should be well-advised to not claim a result, but to include sufficient language in the claim body to narrow claim scope so as to avoid pre-emption. Further, patentees may want to consider including language in at least one independent claim that would prevent a court from ignoring the technical improvement to which the claim is directed. For example, the patentee in Digitech could have explicitly claimed using the device profile to generate an image.

[1] Alice Corp. v. CLS Bank   573 U. S. ___, ____ (2014)
[2] Gotthschalk v. Benson, 175 USPQ 673, 676 (1972)
[3] http://www.uspto.gov/patents/announce/alice_pec_25jun2014.pdf
[4] Bilski v. Kappos, 561 U.S. 593, 599 (2010)
[5] LeRoy v. Tatham, 14 How. 156, 175 (1853)
[6] Parker v. Flook. 437 U.S. 584, 594-595 (1978)
[7] http://patentlyo.com/patent/2014/07/strongly-eligibility-limitations.html?utm_target/=feedburner&utm_medium=email&utm_campaign=Feed%3A+PatentlyO+%28Dennis+Crouch%27s+Patently-O%29
[8] Alice Corp. v. CLS Bank   573 U. S. ___, ____ (2014) (slip op., at 6)
[9] Diamond v. Diehr, 209 USPQ 1 (U.S. 1981)
[10] Alice Corp. v. CLS Bank   573 U. S. ___, ____ (2014) (slip op., at 10)
[11] I*d.,* (slip op., at 9)
[12] *Id.,* (slip op., at 6)
[13] *Id*., (slip op., at 7)
[14] *Id.*
[15] CLS Bank v. Alice Corp. 106 U.S.P.Q.2d 1696, 1705 and 1719 (Fed. Cir. 2013), as referred to in http://www.law360.com/articles/546509/routine-means-necessary-for-section-101.
[16] Digitech Image Technologies, LLC v. Electronics For Imaging, Inc., Case No. 13-1600 (Fed. Cir. July 14, 2014)
[17] Alice Corp. v. CLS Bank   573 U. S. ___, ____ (2014) (slip op., at 7)
[18] O'Reilly v. Morse, 56 U.S. 62 (1853)
[19] Id., at 117.
[20] Id., at 113.